

# Safe Well Water RI

Trusted, expert information

## Tip Sheet 10



“Tip sheets helped us learn about our well water.”

Get Tip Sheets at [www.riwelltesting.org](http://www.riwelltesting.org):

- 14 Tip Sheets about harmful substances
- 10 Tip Sheets about treatment choices
- 3 Tip Sheets about other topics of concern

**Well water** is groundwater, meaning that it comes from the water stored in the earth and rocks below ground. Even though groundwater is *under* the surface, substances *on* the surface, such as gas from a lawnmower or animal waste, can seep down and pollute it. Some natural substances stored in rocks and soil can also affect the smell, taste, color, and safety of well water.

# MtBE (Methyl tertiary-Butyl Ether) in Drinking Water Wells

**MtBE:** A chemical once added to gasoline which can pollute groundwater

MtBE was added to gasoline in many states to help car engines work better and reduce air pollution. But gas leaks and spills turned it into a groundwater pollutant. Once in groundwater, it stays for a long time. Remember, groundwater is the source of well water. About 1 in 5 private wells in New England are polluted with MtBE. It was banned in Rhode Island in 2007.

## What problems can MtBE cause?

- **Unpleasant odor and taste**  
Some people say water with MtBE smells like turpentine. Others report a “fruity” or cleaning agent smell.
- **Unclear health effects**  
Most health research has focused on results of *breathing* MtBE. Some research animals have developed cancer or other serious health problems after breathing large amounts of MtBE. Lab rats and mice that have consumed water with high levels of MtBE have developed liver and kidney damage and nervous system disorders.

Human health effects from drinking water with MtBE are not yet clear. But, it seems likely that it can cause cancer, although how much it takes and for how long is not certain.



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## How will I know if I have MtBE in my well water?

**You may notice** a strange smell or taste as noted above. Some people notice this at low levels. Others don't notice until levels are high.

### **Use a State-certified lab to test your water.**

Find a list here: [www.health.ri.gov/find/labs/privatewelltesting](http://www.health.ri.gov/find/labs/privatewelltesting).

**Compare the numbers and letters** on your lab test results with the standards (limits) set by the United States Environmental Protection Agency (EPA).

The EPA standard for MtBE is a Drinking Water Advisory. A Drinking Water Advisory is a water quality standard for substances that can harm health.

### **EPA limit (Drinking Water Advisory) for MtBE:**

**At or below** 20 – 40 µg/L (micrograms per liter)

**At or below** 20 - 40 ppb (parts per billion)

## How does MtBE get into well water?

### **From leaks and spills:**

- Refilling lawnmowers, chainsaws, or other gasoline engines
- Leaking gas tanks or gas powered engines
- Leaking underground storage tanks and pipelines, especially at gas stations
- Car crashes and other accidents

Once MtBE gets into groundwater, it can stay for a long time.

## What can I do about MtBE in my well water?

### **Four possible solutions if your well water tests high for man-made chemicals:**

- 1. Get expert advice.** Call us.
- 2. Use another source** for your drinking water, such as drilling a new well or drinking and cooking with bottled water.
- 3. Connect to a public water supply** if available.
- 4. Use a home treatment method.** Methods that remove chemicals include:
  - ▶ Activated carbon—Tip Sheet 17
  - ▶ Aeration—Tip Sheet 18

**Important:** Before you install a treatment system, call us for expert advice. *Before* you buy a system, ask how it will be installed and whether this costs extra. Get at least 3 price quotes. Learn the questions to ask. See Tip Sheet 16. *After* you buy a system, be sure to:

1. Keep all the paperwork and directions.
2. Learn what you must do to maintain the system and do it.

### **Learn more**

Get Tip Sheets about choosing and buying water treatment systems at [www.riwelltesting.org](http://www.riwelltesting.org).